Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Previously presented) A method for measuring tissue edema, in which method

an electromagnetic probe is placed on the skin during the measurement, and a capacitance of the probe is proportional to a dielectric constant of the skin and subcutaneous fat tissue, which is further proportional to a water content of the skin,

a distance between two electrodes of the probe being large enough in order for the electronic field to penetrate up to the subcutaneous fat tissue, and the said distance is about 6 mm to about 10 mm,

the edema is scored by measuring the capacitance of the electromagnetic probe at a high frequency, approximately 20-500 MHz.

2. (Previously presented) A method according to claim 1, in which

the measurement is made manually and takes only a few seconds.

3. (Previously presented) A method according to claim 1, in which

for the measurement the probe is secured on the skin by an attachment, such as strap-like attachment, for a long time, for instance hours or days, in which case the edema can be monitored continuously.

4. (Previously presented) A method according to claim 1, in which

a device comprising the electromagnetic probe operates only on a single precisely set frequency.

5. (Previously presented) A method according to claim 1, in which

the edema of uppermost layers of the skin is measured using a frequency of approximately 20-50 MHz, in which case an electric field is concentrated in the uppermost layers of the skin.

6. (Previously presented) A method according to claim 1, in which

the edema of deep skin layers and the underlying subcutaneous fat is measured using a frequency of approximately 50-500 MHz, in which case an electric field penetrates deeply into the skin and the underlying subcutaneous fat.

7. (Previously presented) A device for measuring tissue edema, which device includes

an electromagnetic probe in order to be placed on the skin during the measurement, wherein a capacitance of the probe

is proportional to a dielectric constant of the skin and subcutaneous fat tissue, which is further proportional to a water content of the skin,

a high frequency unit for measuring the capacitance of the electromagnetic probe, wherein the high frequency unit is arranged to measure the capacitance of the electromagnetic probe at a first range of approximately 20-50 MHz, wherein the high frequency unit is arranged to measure the capacitance of the electromagnetic probe at a second range of approximately 50-500 MHz, wherein the first range corresponds to a measure of upper layers of the skin, and wherein the second range corresponds to a measure of deep layers of the skin and the subcutaneous fat tissue,

a unit for calculating measured values and the tissue edema, and

a distance between two electrodes of the probe being large enough in order for the electronic field to penetrate up to and including the subcutaneous fat tissue, and the said distance is about 2-10 mm.

8. (Previously presented) A device according to claim 7, in which the device is arranged to measure only on a single precisely set frequency.

9. (Canceled)

10. (Canceled)

11. (Previously presented) A method for measuring tissue edema comprising:

placing an electromagnetic probe on the skin, wherein a distance between two electrodes of the probe is about 2-10 mm;

generating a first signal from an oscillator, wherein a frequency of the first signal is about 20 to about 500 MHz;

transmitting a first portion of the first signal to the probe and through the skin and subcutaneous fat tissue;

receiving a reflected signal from the skin and subcutaneous fat tissue through the probe;

leading the reflected signal to a first input of a phase detector;

transmitting a second portion of the first signal to a second input of the phase detector;

operating the phase detector in a saturated state, wherein signal amplitudes from the reflected signal and the second portion of the first signal form the saturated state;

measuring a phase difference between the reflected signal and the second portion of the signal;

calculating a dielectric constant from the phase difference; and

calculating a water content of the skin based on the dielectric constant.

12. (Previously presented) A device according to claim 7, in which the high frequency unit comprises an oscillator, a power splitter, and an attenuator connected between the oscillator

and the power splitter, wherein attenuator is configured to prevent access of a signal reflected from the electromagnetic probe.

13. (New) A device according to claim 12 wherein attenuator is configured to prevent access of a signal reflected from the electromagnetic probe to an amplifier, and wherein under the influence of the amplifier the signal reflected from the electromagnetic probe goes twice through the attenuator when propagating to an input of the amplifier.

14. (New) A method according to claim 1 wherein a measured value of the edema is based, at least partially, on the dielectric constant of the subcutaneous fat tissue.

15. (New) A method according to claim 1 wherein the measuring of the capacitance of the probe at the high frequency further comprises measuring the edema at layers of the skin beyond superficial layers of the skin.

16. (New) A method according to claim 1 wherein the tissue edema is measured only at the dermis and the underlying subcutaneous fat.

17. (New) A device according to claim 7 wherein a measured value of the tissue edema is based, at least partially, on the dielectric constant of the subcutaneous fat tissue.

18. (New) A device according to claim 7 wherein the high frequency unit is configured to measure the capacitance of the probe at the first range and the second range for measuring the tissue edema at layers of the skin spaced from superficial layers of the skin.

19. (New) A device according to claim 7 wherein the tissue edema is measured only at the dermis and the underlying subcutaneous fat.